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Before the FEDERAL COMMUNICATIONS COMMISSION Washington, D.C. 20554

In the Matter of)	DEC - 1 2000
Inquiry Concerning High-Speed)	PEDERAL COMMENCATIONS COMMENCE
Access to the Internet Over Cable and Other Facilities)	GN Docket No. 00-185
Cable and Office Facilities	,	

COMMENTS OF COX COMMUNICATIONS, INC.

Respectfully submitted,

COX COMMUNICATIONS, INC.

Barbara Esbin J.G. Harrington Laura Roecklein

Dow, Lohnes & Albertson, PLLC 1200 New Hampshire Avenue, N.W. Suite 800 Washington, D.C. 20036 (202) 776-2000

Alexander V. Netchvolodoff Alexandra M. Wilson Cox Enterprises, Inc. 1225 19th Street, N.W. Suite 450 Washington, D.C. 20036 (202) 296-4933

Its Attorneys

December 1, 2000

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SUMMARY

Although still in its infancy, the broadband marketplace that the Commission is examining in this proceeding could hardly be healthier. Competition for broadband and other Internet access services is flourishing. Investment in broadband networks and technologies continues to grow. Consumers around the country enjoy a range of Internet service choices, both narrow and broadband. Subscribership is rising rapidly, and innovative new broadband applications continue to emerge.

All of these exciting developments have occurred with minimal government intrusion. Indeed, the Commission has steadfastly maintained that market forces, not government micromanagement, will best ensure that the public interest is served. Against this backdrop, the Commission is now asking whether it should reverse this policy and respond to demands that it become intimately involved in regulating relationships among the myriad companies that help provide Internet access to consumers. Specifically, the Commission questions whether it should require broadband service providers, including cable operators, to carry unaffiliated Internet service providers ("ISPs") on their networks on an indiscriminate basis. The only sound answer to this question – from a legal, policy and technology perspective – is "no."

Indeed, Congress already has resolved the mandated access issue, at least as far as cable operators are concerned. High-speed Internet access services provided by cable systems meet the statutory definitions of both "cable service" and "information service" set forth in the Communications Act. In no event do they meet the statutory definition of "telecommunications services." They thus cannot lawfully be subjected to the host of common carrier obligations imposed on telecommunications service providers under Title II of the Act.

In adopting these service definitions, Congress codified long-standing Commission precedent that information services and telecommunications services are mutually exclusive. An information service is something more than the pure, unenhanced transmission of information on behalf of a third party – it is an offering in which both provider and customer are able to choose or manipulate the form and content of the transmission. The Commission has repeatedly found that Internet service providers offer unregulated interstate information services. Information service providers do not lose their unregulated status merely because there is an integrated "telecommunications" component in their information service offering. Nor does their regulatory classification change simply because they construct and use their own transmission facilities.

The refusal by both the Congress and the Commission to subject information service providers to common carriage requirements makes perfect policy sense. The robust marketplace in which such providers compete bears no resemblance to the government-protected monopolies for which common carriage obligations were originally designed. Information service providers (including cable data providers) also enjoy no bottleneck control over "essential facilities," a traditional pre-requisite for mandatory unbundling of networks and services.

Besides being dictated by the relevant statutory language and FCC pronouncements, an information service classification for cable Internet service also has the benefit of accomplishing the Commission's three primary policy objectives in this proceeding. First, such a classification enables the Commission to refrain from regulating cable Internet services under current competitive market conditions, in which there is no evidence of market failure. Second, it permits the Commission to develop a coherent national policy with respect to the development and deployment of broadband services in general, and cable data services in particular. And

third, the classification ensures that the Commission has ample ability and authority to implement rules to correct any market failures or other policy concerns about cable data services that might develop in the future.

Some parties in this proceeding will implore the Commission to ignore the statutory definitions, court decisions and Commission precedent, and impose a host of common carrier obligations on cable and other information service providers. The consistent bright line distinction between regulated telecommunications services and unregulated information services, however, has been the cornerstone of the competitive market that presently exists for the Internet. Jeopardizing this cornerstone by treating the transmission component of an information service as a telecommunications service not only would be inconsistent with the express national policy that the Internet remain unregulated; it also would create a devastating entanglement for the entire Internet community, for competition and for consumer welfare.

In addition, technological limitations preclude the imposition of common carriage requirements on cable Internet service providers (and operators of other shared networks) in any event. Requiring cable operators to carry unaffiliated ISPs on an indiscriminate basis is impracticable, if not impossible, as a matter of physics and network functionality. Third-party ISP access can be accommodated, but only through the cable operator's judicious management of the spectrum it has created on its network for high-speed data services, under commercially reasonable terms and conditions, and on a provisioning schedule that the operator controls.

Significantly, cable operators already are motivated by market forces to explore relationships with unaffiliated ISPs. Internet users are making it increasingly clear that they want to have a choice of ISPs from their broadband service provider. To enhance their customers' Internet experience, cable operators are actively exploring ways to enter into

relationships with ISPs that can add value by offering special content or unique functionality. Cox itself plans to conduct a test of its shared broadband high-speed data infrastructure with several unaffiliated ISPs during the first half of 2001, with an eye to seeking relationships with third-party ISPs after its contractual obligation to its affiliated ISP expires. In such a competitive marketplace, surely the best approach is to keep the government away from the bargaining table and let the entity closest to the consumer – the cable operator – negotiate these arrangements.

Finally, there is an additional check on the Commission's authority to impose forced access on cable Internet service providers: the U.S. Constitution. Cable operators are First Amendment speakers who exercise editorial discretion not only when they decide to include a particular channel in a particular service, but also when they decide how much spectrum on their networks to allocate among a range of different services. Mandatory access requirements would fail both the strict and the intermediate scrutiny tests used to assess potential First Amendment violations, and would thus be unconstitutional. In addition, a forced access requirement that has the effect of commandeering some portion of the spectrum on a cable network for use by third-party ISPs raises concerns under the Fifth Amendment's "Takings Clause."

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COMMENTS OF COX COMMUNICATIONS, INC.

Cox Communications, Inc., ("Cox"), by its attorneys, hereby submits its comments in the above-referenced Notice of Inquiry into the provision of high-speed Internet access by cable and other broadband service providers.\(^1\) As discussed below, competition in the highly-dynamic marketplace for broadband and other Internet access services is flourishing. Given the range of service choices enjoyed by consumers around the country, there simply is no policy predicate for forcing cable service providers to carry unaffiliated Internet services providers ("ISPs") on an indiscriminate, common carrier basis. Moreover, the physical limitations of their shared broadband networks preclude the imposition of common carrier access obligations on cable systems offering high-speed Internet access as a matter of physics and network functionality. Cable operators, including Cox, will provide their customers with a choice of ISPs, but these arrangements will be negotiated in private under commercially reasonable terms and conditions.

Because cable operators do not operate common carrier networks and are not providing telecommunications services under Title II of the Communications Act, there also is no statutory basis for the imposition of a mandatory open access requirement. Rather, cable operators, like

¹ Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities, *Notice of Inquiry*, GEN Docket No. 00-185, FCC 00-355 (rel. September 28, 2000) ("*Notice*").

all other providers of Internet services, are properly categorized as "information service" providers under the Act. As such, they are and must remain unfettered by Federal or state regulation, consistent with the express congressional policy embodied in Section 230 of the Act. Finally, adopting mandated open access requirements for cable would violate cable operators' First and Fifth Amendment rights.

I. COX IS A LEADING PROVIDER OF ADVANCED BROADBAND SERVICES

Cox is the country's fifth largest cable MSO, providing basic cable services to roughly 6 million regionally-concentrated and highly-clustered customers.² Since the passage of the Telecommunications Act of 1996 ("1996 Act"), Cox has transformed itself from a distributor of traditional, one-way video programming services to a provider of multiple, two-way advanced digital offerings. This metamorphosis has been costly, difficult and time-consuming. It also has been embraced fully by Cox's cable customers, who have signaled their approval by purchasing more than 1.2 million new services from Cox to date.

In the past year and a half, Cox spent \$10 billion acquiring more cable systems to ensure that it has sufficient scale and scope to enter the broadband marketplace successfully. Through these acquisitions, Cox increased its customer base from approximately 4 to 6 million. Cox also is spending an additional \$10 billion to upgrade its cable networks to support new broadband services.³ This massive capital investment is already well underway. By the end of this year, roughly 80 percent of Cox's cable plant in its 15 largest cluster markets will have two-way

² More than 70 percent of Cox's customers are located in 15 markets that serve an average of 285,000 customers apiece. Cox's three largest markets are Phoenix (serving 610,000 customers), San Diego (serving 509,000 customers) and New England (serving 430,000 customers).

³ This \$20-plus billion investment in broadband is a substantial commitment for a company with annual revenues of \$3 billion.

capability and 750 MHz capacity. By the end of next year, Cox will have completed similar upgrades for 80 percent of all of its cable systems nationwide.

During the past several years, Cox has deployed three new broadband services over its upgraded cable platform. The first of these is a digital television service, branded Cox Digital Cable, that enables Cox to compete more effectively against the high-channel, high-quality video programming services offered by DBS providers DirecTV and Echostar and, in some cases, the incumbent telephone company. The second offering is a suite of residential local telephone services, branded Cox Digital Telephone, that already has proven to be a formidable lower-priced competitor to services offered by incumbent local exchange carriers. And the third new service is high-speed Internet access, offered by Cox under the brand names Cox@Home, Cox Road Runner and Cox Express. These services provide customers high-speed access to the Internet via cable modems and a network designed to maximize cable technology.

Customer response to these new digital services has exceeded expectations. At the end of the third quarter of 2000, Cox provided digital television service to 683,000 customers, residential telephony services to 206,000 customers using over 285,000 telephone lines, and high-speed data services to 399,000 customers. Customer acceptance of Cox's new services continues to accelerate: Cox is now installing 18,000 new services each week, more than double its weekly run rate of 7,500 one year ago.

Cox intends to continue deploying this trio of digital services throughout its cable systems over the next four years. By the end of 2004, Cox anticipates that over 95 percent of the households passed by its networks will have the option of purchasing Cox Digital Cable and

⁴ For example, U S West (now Qwest) provides a 181-channel, digital video programming service in Phoenix called Choice TV using VDSL technology.

Cox's high-speed Internet access service, and fully 65 percent will be able to purchase Cox Digital Telephone. Although Cox still enjoys a healthy growth rate in its provision of basic cable services (2.4 percent for third quarter 2000), it expects growth for its new digital services to be far more robust.

To take further advantage of its broadband platform, Cox also is exploring how to provide other advanced services to its customer base. It already has begun limited testing of video-on-demand and a variety of interactive television ("iTV") applications. Cox's San Diego system, for example, has launched a video-on-demand trial, and also is working with Liberate and Excite@Home on an iTV trial that it plans to launch to paying customers early next year. Other Cox systems have partnered with WorldGate to deploy its iTV technology. Cox also is actively pursuing other broadband service concepts, including e-commerce, energy management and home security monitoring. For instance, Cox's Las Vegas system has undertaken a trial with @Security to test a home security service called SafeVillage.

Given the complexity, risk and substantial operational challenges involved in developing and deploying a new broadband service, it is no surprise that Cox sometimes elects to provide the service through a joint venture in which Cox's venture partner contributes specialized expertise and shares the financial risk. When Cox and other cable MSOs entered into their joint venture with @Home several years ago, for example, there was widespread skepticism even among key equipment manufacturers that high-speed cable data services could be deployed successfully to the mass market. The cable MSOs also did not have the expertise to provision software or design and operate a distributed national data network, among other things. By partnering with @Home on a limited-term exclusive basis to develop and deploy high-speed Internet access over the cable infrastructure, the cable MSOs were able to share the enormous

financial risk and obtain the necessary expertise. Had Cox not been able to enter into that relationship – and guarantee its venture partners a limited exclusivity – it would not have been able to roll out high-speed cable data services. When that exclusivity expires, Cox is committed to seeking relationships on commercially reasonable terms and conditions with other ISPs to provide additional high-speed data services over its cable networks.

* * * * *

As the foregoing demonstrates, Cox is an established leader in its local markets in the provision of consumer broadband services. This experience makes it particularly well-suited to respond to the questions raised in the Commission's *Notice*.

II. THERE IS NO POLICY PREDICATE FOR GOVERNMENT-MANDATED ACCESS TO BROADBAND PLATFORMS

A. The Broadband Market Is Competitive

The Commission has been assessing competition in the marketplace for high-speed Internet access almost from the moment that broadband services were introduced to the American public. In proceeding after proceeding over the past several years, the Commission has concluded that the marketplace for broadband services is, and likely will remain, competitive. Cox already has considerable experience with the market forces that influence the deployment of broadband services. Its experience fully confirms the Commission's earlier conclusions that broadband service providers face significant and growing competition.

The Commission first studied broadband services in 1998, when it conducted its maiden inquiry under Section 706 of the 1996 Act. That provision requires the Commission to regularly assess "whether advanced telecommunications capability is being deployed to all Americans in a

reasonable and timely fashion."⁵ In its first report to Congress on this question, released in February 1999, the Commission observed that, although "the consumer broadband market is in the early stages of development,"⁶ "deployment of broadband, both backbone and last mile, is occurring on a major scale."⁷ It further determined that there was every reason to believe that consumer broadband services would be provided in a competitive marketplace:

The preconditions for monopoly appear to be absent. Today, no competitor has a large embedded base of paying residential consumers. The record does not indicate that the consumer market is inherently a natural monopoly. . . . [T]here are, or likely will soon be, a large number of actual participants and potential entrants in this market. . . . The consumer market for broadband should be characterized by new products and services being offered and costs falling as a result of technological change. 8

Eighteen months later, in August 2000, the Commission affirmed this initial assessment in its second Section 706 Report. Using data from a survey of broadband service providers and other public sources, the Commission concluded that competition in the advanced services marketplace is in fact emerging at a healthy rate. With respect to the consumer market in particular, the Commission observed that "advanced telecommunications capability is available now and continues to be deployed to a significant number of residential customers in communities of all types – affluent and lower income, inner city, suburb, small town and thinly populated countryside." The Commission further determined that this trend will only

⁵ Pub. L. No. 104-104, Title VII, § 706(b), 110 Stat. 153 (1996).

⁶ Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, *Report*, 14 FCC Rcd 2398, 2405 (1999) ("First Section 706 Report").

⁷ Id. at 2415.

⁸ *Id.* at 2423-25.

⁹ Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, Second Report, CC Docket No. 98-146, FCC 00-290, ¶ 217 (rel. Aug. 21, 2000) ("Second Section 706 Report").

accelerate. "By all major indicators, both residential subscribers and investment in facilities will continue to increase. Investment of billions of dollars in deploying ATC [advanced telecommunications capability] to residential customers will continue. Rivalry among providers will increase. New technologies will continue to become available. Consumer demand will continue to grow."

In addition to these general inquiries into the state of broadband deployment, the Commission has had several other occasions on which to examine the competitiveness of the Internet access market. When analyzing the proposed acquisition by AT&T of TCI's cable systems in early 1999, the Commission observed generally that "there are a large number of firms providing Internet access services in nearly all geographic markets in the United States, and these markets are quite competitive today." Focusing specifically on the provision of high-speed Internet access, the Commission noted that "quite a few other firms [in addition to AT&T-TCI] are beginning to deploy or are working to deploy high-speed Internet access services using a range of other distribution technologies." By the time the Commission was asked to examine the proposed merger of AT&T and MediaOne one year later, it was able to make an even more definitive statement about the status of broadband competition. "We find that there is significant actual and potential competition [to cable broadband services] from both alternative broadband providers and from unaffiliated ISPs that may gain access to the merged firm's cable network." Cable broadband access to the merged firm's cable network.

 $^{^{10}}$ *Id.*, ¶ 218.

¹¹ Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations from Tele-Communications, Inc., Transferor to AT&T Corp., Transferee, *Memorandum Opinion and Order*, 14 FCC Rcd 3160, 3206 (1999).

¹² Id.

¹³ Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations from MediaOne Group, Inc., Transferor, to AT&T Corp. Transferee, *Memorandum Opinion and Order*, 15 FCC Rcd 9816, 9866 (2000).

Cox's own experience in the Internet access marketplace only confirms the Commission's conclusion that the market is competitive. Cox began providing high-speed access to the Internet over its upgraded cable system in Orange County, California in the fourth quarter of 1996. Since then, it has aggressively rolled out Cox@Home in most of its large markets. Yet as strong as consumer demand has been for its cable modem services, Cox has not won its customers without a fight. Cox faces competition from a number of alternative Internet access service providers in all of its local markets. Most obviously, all of Cox's customers can choose from an array of narrowband dial-up ISPs. These services offer Internet access at slower speeds than Cox's cable modern services, and they typically do not include the "always-on" capability that Cox's high-speed Internet access services provide. Nonetheless, as Cox's market research shows, large numbers of Cox customers continue to view narrowband dial-up services as fully satisfying their Internet access needs. The vast majority of customers online use the Internet primarily for e-mail and web surfing purposes – activities that are readily supported by a 56.6 Kbps dial-up service. 14 Although applications requiring greater bandwidth are being developed, they have yet to become an integral part of the Internet experience for most online customers.

Accordingly, when Cox makes pricing decisions for its Cox@Home and other high-speed data services, it strives to make those prices competitive to dial-up services. This approach is evident in Cox's marketing materials, which frequently contain price comparisons to dial-up as well as to other broadband services. As Steve Case, CEO of America Online has stated, a customer's upgrade to broadband service is largely a function of price – as is the decision to fly

¹⁴ See Ken Kerschbaumer, Is the Web Losing Its Leisure-Time Appeal?, BROADCASTING AND CABLE, November 6, 2000, at 42 (citing recent PricewaterhouseCoopers Consumer Technology study finding that the two top reasons

first class rather than coach.¹⁵ For these reasons, Cox believes that dial-up Internet access will continue to provide significant competition to its broadband cable modern services for the foreseeable future.

Moreover, an increasing number of companies are beginning to offer competitive broadband services in Cox's local markets. For example, in Phoenix, Arizona, one of Cox's most mature markets, U S West (now Qwest) has aggressively rolled out its MegaBit DSL service, increasing its customer base from 5,000 in mid-1999 to an estimated 25,000 today. Other DSL service providers in Phoenix include Flashcom, Rhythms DSL, and Broadband Digital Group, which offers a free DSL service that is advertiser-supported. Consumers also may choose from two wireless broadband services: Speed Choice (available in 90 percent of the market) and Sprint Broadband Direct. Alternatively, they may select DirectPC, a high-speed Internet access service offered by DBS provider DirecTV. Some Phoenix consumers even have a choice of cable modem service providers: instead of Cox@Home, they may purchase "TERRAbit," a high-speed data service offered by cable overbuilder Cable America.

These different broadband providers offer Phoenix customers a wide variety of service options. For example, for \$29.95 a month (exclusive of ISP service¹⁶), residential consumers can purchase Qwest's "MegaBit Deluxe," a DSL service that promises always-on connectivity and provides between 256 and 640 Kbps both upstream and downstream. Alternatively, for \$19.95 a month (exclusive of ISP service), consumers can opt for Qwest's less expensive "MegaBit 256"

consumers use the Internet are for research (90%) and e-mail (89%)).

¹⁵ According to Mr. Case, "A lot of people are very satisfied with the service they get today. People would like it to be faster; most people are willing to pay something more for it, but not necessarily twice as much for it." Morgan Stanley Dean Witter Software, Networking, and Internet Conference; Presentation with AOL CEO Steve Case and Morgan Stanley Analyst Mary Meeker, January 5, 1999. http://www.corp.aol.com/ir/presentation2.html>

¹⁶ ISP service typically costs an additional \$22 a month.

Select," which offers similar speeds but limits users to two-hour sessions and provides less reliable connectivity. ¹⁷ Cox also offers two levels of residential service in Phoenix: Cox@Home (available in upgraded areas), which provides speeds of up to 3 Mbps downstream and 256 Kbps upstream for \$39.95 a month, and Cox@Home Express (available in non-upgraded areas), which offers somewhat slower speeds (up to 1.5 Mbps downstream and 33.6 Kbps dial-up upstream) but also a lower price point (\$19.95 a month). Sprint Broadband Direct charges \$39.95 a month for its 2 Mbps downstream/256 Kbps upstream high-speed service, while Cable America charges \$49.95 a month for its very high-speed cable modem service (up to 10 Mbps in both directions). Phoenix customers shopping among these and other Internet access services also enjoy many choices with respect to features such as modem rental or purchase, installation and activation charges, number of e-mail accounts and amount of webspace provided.

Consumers in Cox's New England system (which includes franchise areas in Connecticut and Rhode Island) face a similarly broad range of Internet access choices. Verizon in Rhode Island and SNET in Connecticut offer both residential DSL and dial-up Internet access. Network Plus offers residential customers customized packages of voice and DSL services. Other DSL providers offering residential data services include Northpoint, Rhythms and Covad. Telergy has partnered with Narrangansett Electric to use its interduct and fiber to provide residential phone and data services. Still other companies have announced that they will soon begin offering broadband services over their own high-capacity networks. American Broadband, for example, is constructing a broadband network in Rhode Island over which it plans to provide packages of consumer voice, video and high-speed data services. It expects to be operational in the second

¹⁷ After the two-hour session, the user must wait five minutes before logging on again.

quarter of next year. And, in Connecticut, overbuilder Gemini Communications plans to begin launching broadband services over its new network by the end of the year.

A brief comparison of just a few of these offerings reveals the range of high-speed Internet choices that New England consumers enjoy. For \$29.95 a month, consumers can purchase a \$299 modem and sign up for Cox@Home, which offers speeds up to 3 Mbps downstream and 256 Kbps upstream. Or, for \$39.95 a month (inclusive of ISP service), they can rent a modem and purchase Verizon's "Personal Infospeed" service, which offers speeds up to 672 Kbps. If a consumer wants even greater speed and has his own ISP, Verizon offers three price points for three different speed ranges as part of its "Professional Infospeed" service. ¹⁸ SNET similarly offers consumers a choice between "basic" and two levels of "professional" DSL service. SNET Basic DSL provides speeds of 1.5 Mbps downstream/128 Kbps upstream for \$39.95 a month with a one year contract; SNET Professional DSL (A) offers the same speeds and additional IP accounts for \$79.00 a month; and, SNET Professional DSL (B) offers 6.0Mbps downstream/384 Kbps upstream for \$199.00 a month.

Significantly, Cox has noticed a substantial drop in the price and/or an increase in the availability of DSL in its markets after the launch of Cox@Home. For example, in Orange County, Pacific Bell charged more than \$100 for its DSL service before Cox began offering cable modem service in late 1996. Pacific Bell now offers DSL service to Orange County customers for only \$39.95 a month (plus ISP charge), and has expanded its DSL coverage to 40 percent of Cox's local service area. In Oklahoma City, Southwestern Bell did not begin offering DSL service until after Cox@Home was launched. When it did roll out its DSL service in late

¹⁸ The price points are \$39.95, \$59.95 and \$109.95 a month for speeds of 640 Kbps downstream/90 Kbps upstream, 1.6 Mbps downstream/90 Kbps upstream, and 7.1 Mbps downstream/680 Kbps upstream, respectively.

1999, the standard rate was \$49.95 a month (plus ISP charge). Today, in this very competitive market, Southwestern Bell offers customers a 12-month contract at \$39.95 a month with free installation, free modem and free ISP service.

Taken together, these data demonstrate that Cox already faces considerable competition in the provision of high-speed Internet access. Far from enjoying a protected or dominant market position, Cox is subject to a full array of competitive market forces and must respond accordingly. Moreover, that competition will only become more intense as more broadband providers enter its local markets. Qualcomm and Sprint PCS, for example, have already begun trials in the U.S. of a third-generation ("3G") broadband wireless network. According to the companies, the data trials should lead to commercial deployment of the network by Sprint PCS in the second half of 2001. ¹⁹ Both Sprint and WorldCom are gearing up to introduce multichannel, multipoint distribution service ("MMDS") into a number of markets over the next few months, as a complement to DSL. ²⁰ Moreover, companies such as RCN Corporation have begun rollout of their bundled high speed service packages. RCN offers phone, cable and high-speed Internet services over the company's Megaband Network throughout the East and West Coast corridors. ²¹ Cox's experiences thus bolster the Commission's earlier conclusion: competition in the provision of high-speed Internet access is alive and well.

B. Competition Precludes the Imposition of Forced Access Requirements

In the face of a competitive broadband marketplace, the Commission has no sound policy basis on which to impose "open access" on broadband service providers. As the Commission

¹⁹ < http://www.allnetdevices.com/wireless/news/2000/05/10/sprint pcs.html>.

²⁰ http://www.internetweek.com/infrastructure/infra092500-1.htm.

²¹ http://www.clec-planet.com/news/0003/000317rcn.htm.

correctly observes in the *Notice*, there is no consensus among industry participants or regulators about what "open access" actually means.²² At the heart of the requests that have been floated by various "open access" proponents, however, lies the notion that broadband service providers should be required to allow unaffiliated ISPs to use their networks pursuant to government mandate rather than marketplace negotiations.

Yet before pursuing an interventionist policy, regulators necessarily would have to embrace one (or both) of two distinct arguments. Specifically, they would have to conclude either (1) that the market power of certain service providers is so strong that the government must force open their networks to competitors; or (2) that, without regard to market power, the public interest can only be served if common carrier principles (such as interconnection and non-discriminatory carriage) are imposed on all broadband service providers.²³ Even a cursory analysis of these two propositions reveals that each is fatally flawed.

1. The Prerequisites for Mandatory Unbundling Do Not Exist

Although there have been occasions on which a facilities owner, in the name of competition, has been forced by government to share its plant with third parties, those occasions have been few and far between. When facilities sharing (or "unbundling") has been mandated, courts and regulators have used theories akin to the antitrust "essential facilities" doctrine. As a brief review of that doctrine makes clear, it cannot be applied to cable modem and other competitive service providers in today's broadband marketplace.

²² *Notice*, ¶ 27.

²³ Although the *Notice* asks numerous questions about cable modem services in particular, there is no basis for distinguishing among the range of broadband service providers that are entering the marketplace when considering many of the policy issues raised by the *Notice*. For example, there is no reason to consider imposing common carrier obligations on cable companies and not also consider imposing them on similarly-situated service providers such as DBS companies, MMDS operators, cable overbuilders, broadcasters and PCS carriers.

Generally speaking, the prerequisites for application of the essential facilities doctrine are: (1) control of an essential facility by a monopolist; (2) the inability of competitors, practicably or reasonably, to duplicate the essential facility; (3) the refusal of the monopolist to let would-be competitors use the facility; and (4) a facility that is capable of being shared.²⁴

Those who would use this doctrine to mandate forced sharing in the broadband marketplace could not meet the first prerequisite, let alone the second, third or fourth. As the Commission itself has recognized, most broadband service providers are not monopolists controlling essential facilities.²⁵ Indeed, the only "monopolists" are the incumbent telephone companies, who enjoy a monopoly position not in the broadband services marketplace but in the telecommunications market for local exchange services.²⁶ All other broadband providers are simply jockeying for position in a competitive marketplace in which cable modem, DSL, and a range of satellite and wireless broadband technologies are being rapidly deployed.

²⁴ The essential facilities doctrine is succinctly described by Professor Einer Elhauge, Harvard Law School, in his paper, *Analysis of the Proposed Internet Freedom Act*, released October 12, 1999 (available at http://www.ncta.com).

²⁵ See, e.g., Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services; Hyperion Communications Long Haul, L.P.; Application for Expedited Review, *Third Report and Order and Memorandum Opinion and Order*, 15 FCC Rcd 11857, 11865 (2000) (stating that the "record before us, which shows a continuing increase in consumer broadband choices within and among the various delivery technologies – xDSL, cable modems, satellite, fixed wireless, and mobile wireless, suggests that no group of firms or technology will likely be able to dominate the provision of broadband services.").

Moreover, even in the local exchange market, the ILECs' monopoly control over essential facilities is limited primarily to the local loop and a handful of other critical unbundled network elements. See Application of GTE Corporation, Transferor, and Bell Atlantic Corporation, Transferee; For Consent to Transfer Control of Domestic and International Sections 214 and 310 Authorizations and Application to Transfer Control of a Submarine Cable Landing License, Memorandum Opinion and Order, CC Docket No. 98-184, FCC 00-221, ¶ 269 (rel. June 16, 2000) ("We find that, as a general matter, incumbent LECs have no market power in the advanced services market independent of their bottleneck control of those facilities, such as local loops, that are necessary to provide such services."); see also Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, Third Report and Order and Fourth Further Notice of Proposed Rulemaking, 15 FCC Rcd 3696 (1999) (limiting the national list of unbundled network elements to local loops (including dark fiber and high-capacity loops), subloops, network interface devices, local switching (except under certain highly competitive conditions), interoffice transport, signaling and call-related databases, operations support systems, and, in very limited situations, packet switching).

Furthermore, in the case of cable modem service providers at least, regulators would be hard pressed to find that the remaining elements of the essential facilities doctrine have been satisfied. Just as consumers have a range of ways to access the Internet, broadband service providers have numerous options for securing the telecommunications capability needed to provide an Internet connection. The most obvious choice is to use the ubiquitous telecommunications network built by the incumbent telephone companies that is in the process of being updated to carry broadband services. Many service providers have, in fact, chosen to go this route. A number of others have decided instead to self-provision the requisite telecommunications capability by building their own broadband networks. Given the widespread availability of the public telephone network and the enormous risk investment that is being made in the deployment of other "last-mile" technologies, it is impossible to argue that cable's broadband competitors cannot "practicably and reasonably" hope to find an alternative distribution facility (thus failing the second element).

Similarly, the fact that most large cable MSOs, including Cox, are now actively exploring ways to bring additional ISPs onto their networks belies an assertion that cable systems are "refusing" to let would-be competitors use their facilities (the third element).²⁷ And, with respect to the fourth element concerning feasibility of facilities-sharing, the laws of physics dictate that a shared network such as an upgraded cable system cannot accommodate all ISPs indiscriminately and still operate.²⁸ In short, there is no aspect of the essential facilities doctrine that can reasonably be applied to cable high-speed data services.

²⁷ See discussion of Cox announcement of third-party trials in Section III, infra.

²⁸ See discussion in Section III, infra.

Finally, the public interest requires the Commission to hew closely to the teachings of the essential facilities doctrine, particularly given a marketplace as dynamic as that for broadband services. The adverse social consequences that result from a forced sharing requirement were recently described by Justice Breyer in his concurring decision in *AT&T v. Iowa Utility Board*.²⁹ As Justice Breyer observed, even a simple obligation to share a physical facility imposes significant administrative costs because a regulatory body must then be tasked with overseeing the terms and conditions of access. Additional societal costs then arise because the sharing "may diminish the original owner's incentive to keep up or improve the property by depriving the owner of the fruits of value-creating investment, research, or labor."³⁰ Furthermore, "the more extensive the sharing demanded, the more likely these costs will become serious . . . And the more serious they become, the more likely they will offset any economic or competitive gain that a sharing requirement might otherwise provide."³¹

Justice Breyer also observed that a policy that merely encourages competitors to all use the same underlying resources does little for competition as a whole:

A totally unbundled world – a world in which competitors share every part of an incumbent's existing system, including, say, billing, advertising, sales staff, and work force (and in which regulators set all unbundling charges) – is a world in which competitors would have little, if anything, to compete about.³²

The same principles should apply when evaluating the relative merits of a governmentimposed "open access" policy for broadband service providers. Where, as here, the marketplace

²⁹ 525 U.S. 366 (1999).

³⁰ Id. at 428-29 (Justice Breyer concurring in part and dissenting in part). A similar theory is embodied in federal copyright and patent law, which grants creators and inventors a protected period of time in which to exploit exclusively the fruits of their labor.

³¹ *Id.* at 429 (citation omitted).

³² Id. at 430.

is both competitive and highly dynamic, regulators should adopt policies that promote innovation and consumer choice. Accordingly, except where it is a monopolist controlling an essential facility, a broadband facilities owner should not be required to share its plant with unaffiliated third parties.

2. Mandatory Common Carrier Requirements Are Not Necessary and Would Not Benefit Consumers

A second argument made by some "open access" proponents is that the public interest will be served only if all broadband service providers are required to provide a separate telecommunications service and interconnect on a nondiscriminatory basis with all unaffiliated ISPs. However, there is absolutely no evidence that all broadband services must be subjected to common carrier regulation to ensure that the broadband marketplace develops or that American consumers are well-served. To the contrary, the facts reveal that the imposition of common carrier obligations on competitive service providers would only slow (or even halt) broadband deployment, increase costs, undermine innovation and limit competitive entry. Past government efforts to force service providers into a common carrier business model have been far from successful. One need simply look to video dialtone and the open video service for compelling examples of a failed "open access" approach.

Moreover, the only way to successfully impose common carrier obligations on broadband service providers is to force them all into the "dumb pipe" transport business. Unlike the incumbent telephone companies, however, most broadband providers have not chosen to offer a pure transmission service that can be used without restriction as an input to create a more sophisticated product. This decision has been driven both by limits imposed by the providers'

long-standing network design³³ and by their need to pursue a business plan that will enable them to recoup their enormous investments in new broadband technology. Forcing them to completely redesign (not just upgrade) their networks and revamp their business plans makes no sense in a competitive marketplace where government is encouraging providers to deploy broadband services as rapidly as possible.

Policymakers also should not ignore the history of common carriage – a centuries-old concept that is tied closely to the idea of limited competition. Under English common law, a designated provider (such as a ferry boat) was granted an exclusive right to serve a given area. In exchange, the service provider was obligated to carry all comers at rates announced in advance.³⁴ The imposition of common carrier requirements thus served as the *quid pro quo* for the profitable designation as a protected service provider. This arrangement was then imported wholesale to the United States, being applied first to the transportation industry and, thereafter, to the telephone industry.³⁵

The imposition of common carrier requirements on telephone companies more than a century ago has served the country well. Enjoying exclusive franchises, a guaranteed rate of return and a variety of explicit and implicit government subsidies, telephone companies built a telecommunications network that provides universal service to American consumers on a non-discriminatory basis. Moreover, the very ubiquity of this network, and its corresponding obligation to carry all traffic, helped to ensure the emergence of the Internet and a wide variety of ISPs.

³³ For example, neither cable nor direct-to-home satellite systems originally were designed to handle two-way traffic, and reconfiguring those networks to introduce two-way capability is extremely difficult and expensive.

³⁴ Thorne, Huber and Kellogg, FEDERAL BROADBAND LAW, at § 5.1 (Little, Brown and Company 1995).

³⁵ *Id*.

In the competitive broadband marketplace, however, government will be unable to strike the traditional "common carrier" bargain with new service providers because they enjoy neither protected service areas nor market power. Far from being granted an exclusive franchise, broadband entrants are raising capital and constructing and upgrading networks at their own risk. The assumption of this risk – without the guarantee of a government-backed rate-of-return – inescapably distinguishes non-telephone broadband service providers from more traditional common carriers such as the incumbent telephone companies.

On the other side of the coin, new broadband providers need not be compelled to indiscriminately serve all ISP comers to achieve the government's objective that all American consumers have the opportunity to purchase Internet access. As shown in the preceding section, consumers do have a wide and growing choice of ways to connect to the Internet. Once connected, moreover, they are able to visit any website and access any information (or any ISP) that they desire. Since virtually every consumer is able to find a way onto the Internet, they broadband service providers need not be forced to carry all ISPs indiscriminately to ensure that the American public will be served. Moreover, to the extent that the Commission wishes to promote "widespread and rapid deployment of high-speed services" in particular, it is difficult to see how that goal would be served by mandating common carrier requirements for all broadband service providers, given the enormous operating burdens, costs and delays that establishing and enforcing such requirements would impose on industry and regulators alike.

³⁶ This unfettered access means that broadband customers already are "interconnected" to all other providers and all other ISPs, regardless of whether their service provider is affiliated with one or multiple ISPs.

³⁷ Cox recognizes that there may be certain small areas where no access is available.

³⁸ *Notice*, ¶ 2.

³⁹ Indeed, there are significant administrative and compliance costs associated with cost-of-service regulation, which imposes heavy burdens on regulators and regulated entities, not to mention the costs incurred through the oversight

The far better course is to let participants in the developing broadband marketplace choose their own business model. Not surprisingly, many new entrants may opt not to pursue a pure common carrier approach. Indeed, a number of broadband service providers to date have associated themselves with a single ISP.⁴⁰ Their decision to do so has been dictated by marketplace realities, including technical and operational limitations,⁴¹ the need to raise enormous amounts of risk capital and the resulting business model constraints. These service providers might well have stayed out of the market altogether had they been forced initially to comply with interconnection and non-discriminatory carriage requirements.

However, as Cox's own experience suggests, broadband service providers are facing growing competitive pressure to offer their customers a choice of ISPs. Service providers that already do so (such as DSL companies) are now touting ISP choice as a service differentiator and consumer marketing advantage. To remain competitive, Cox and other broadband providers are actively exploring how to carry more than one ISP on their networks to enhance consumer choice. Since Cox will be seeking out relationships with ISPs that add value to its customers, its carriage will not be indiscriminate (as would be the case under a common carrier approach). Yet consumers clearly will be better served because Cox has every market incentive to enter into

of interconnection arrangements. Moreover, carriers will suffer capital losses due to the investment disincentives that would be created through implementation of common carrier regulation.

⁴⁰ Starpower, with its advanced fiber optic network, for example, has chosen to join forces with Lycos. *See* http://www.starpower.net/. Sprint has teamed with Earthlink for its long distance and Internet package. Other broadband service providers plan to accommodate multiple ISPs. *See* http://csg.sprint.com/internet/. DirecPC, for instance, already accommodates AOL and has recently announced an agreement allowing EarthLink to offer two-way high-speed satellite Internet services. *See* http://www.newsbytes.com/pubNews/00/157237.html and http://www.earthlink.net/about/pr/direcpc.html.

⁴¹ As discussed in Section IV below, it would not be technically possible to treat cable modem service (or other shared network) providers as traditional common carriers in any event.

business relationships with those unaffiliated ISPs that can offer additional enhancements and high-quality service to its customers.

In short, the competitive broadband marketplace is working. The imposition of mandatory common carriage obligations on all service providers would serve no public interest and, in fact, would be detrimental to the prompt deployment of broadband services.

III. THE SHARED SPECTRUM ON CABLE HIGH-SPEED DATA NETWORKS PRECLUDES THE IMPOSITION OF COMMON CARRIER OBLIGATIONS AS A MATTER OF PHYSICS AND NETWORK FUNCTIONALITY

The hallmark of high-speed Internet service provided over broadband cable networks is its high speed. The question of "open access" to the cable platform cannot be divorced from the question of how such access by third-party ISPs would affect Cox's ability to maintain the service's high-speed characteristics and to provide the reliable, high-quality service its customers demand. As demonstrated below, imposition of an immediate, open-ended, common carrier-type regulatory obligation on cable systems to serve all ISP comers on an indiscriminate basis is impossible, as a matter of physics and network functionality. Third-party ISP access can be accommodated only by the cable operator's judicious management of the spectrum it has created on its network for high-speed data services, under commercially reasonable terms and conditions.

As previously noted, in the wake of the 1996 Act, Cox will spend nearly \$10 billion on network improvements, including installation of additional fiber optic cable, "hardening" of system head-ends for improved reliability, installation of management information systems and cable modem terminating systems, and expenditures of incremental capital outlays for items such as cable modems, advanced set-top boxes and telephone network interface units. These improvements increase the capacity of Cox's cable networks from 550 MHz to 750 MHz and

enable them to reliably carry two-way traffic. The improvements are necessary to allow Cox to provide advanced two-way digital video, voice and data services over its cable plant.

Once Cox's cable networks have been upgraded from 550 MHz to 750 MHz, the total amount of spectrum available for the new digital services is about 200 MHz, which includes about 40 MHz reserved for return path (upstream) transmissions. Since Cox must add at least 120 more video channels to offer programming services that are comparable and competitive to existing DBS services, the bulk of the added network spectrum capacity is devoted to video, payper-view and video-on-demand content. An additional 20 MHz is allocated for new digital voice services (10 MHz upstream and 10 MHz downstream), and 16 MHz is allocated for digital high-speed data service (12 MHz downstream and 4MHz upstream). Finally, about 15 MHz is unusable for customer services because it must be devoted to separating the upstream digital traffic from the downstream digital traffic to prevent interference. In short, Cox already has allocated virtually all of the additional 200 MHz added by its system upgrades to new competitive services (120 + 40 + 10 + 12 + 15 = 197 MHz).

The point here is very simple and very straightforward: Cox has allocated 16 MHz of spectrum for high-speed Internet service out of a very limited amount of new spectrum inventory. It is true that, over time, new capacity can be squeezed from its 750 MHz platforms. ⁴² But for the time being, Cox's high-speed Internet service will have to operate within the 16 MHz of spectrum that Cox has allocated for that service because there is no additional spectrum to be had for this purpose.

⁴² Statistical multiplexing, modification from 64 QAM to 256 QAM, conversion of analog channels to the digital tier and finally node splitting can recover additional spectrum -- over time and at considerable additional expense. But it also is true that substantial new claimants for programming content, including HDTV and rapidly expanding video-on-demand, will contend for much of the reclaimed capacity.

This spectrum constraint brings up a profoundly important difference between the topology of a cable network high-speed Internet service and a telephone network high-speed DSL service. In the case of access by third-party ISPs, a DSL loop can be made available by the ILEC or CLEC for whatever use the ISP can get out of it. The only limit on data rates for ISPs using DSL loops in this manner is the limitation of the loop itself. It is wholly independent of the telephone network's basic telephone operations. However, as will be discussed in greater detail below, the cable network does not have a discrete loop that can be turned over to a third-party ISP. Rather, the amount of spectrum allocated by a cable operator for high-speed Internet service must be shared in two ways: as a result of the number of subscribers that new third-party ISPs sign up, and as a result of the type of data or content being sent by each third-party ISP.

Since "high-speed" service is defined by the FCC as the provision of service at a minimum bit rate of 200 Kbps upstream and downstream, ⁴³ the question is, how will Cox's 16 MHz of high-speed data spectrum be affected by allowing third parties to share this allocation? The answer depends upon two variables. First, how will third-party access affect the number of end users in each node? And second, what will be the data rates of third-party ISP users and their customers?

With respect to the first question, Cox's network is upgraded so that, on average, there are about 650 homes per node. The current spectrum allocation allows Cox, for the time being, to provide high-speed Internet service to new and existing customers without falling below the FCC's definition. However, it is possible that a third-party ISP (or on-line service provider) 44

⁴³ Second Section 706 Report at ¶¶ 11-14. Notably, Cox has found that customers generally demand a service that exceeds 200 Kbps upstream and downstream. Through experience in the market, Cox has determined that a 3 Mbps upstream/256 Kbps downstream best serves its customers' needs.

⁴⁴ OSPs provide content as well as an on-ramp to the Internet.

using Cox's high-speed data spectrum (such as AOL with 28 million customers) could so increase the penetration of users within a series of nodes that service to the entire customer base, including Cox's, would fall below the data rates that the pre-existing customer base has been assured.

The issue of data rate reliability could become quite significant if several ISPs with large narrowband customer bases were to gain access to Cox's high-speed data spectrum through regulatory mandate and Cox could not control the service installation rate in each node. The technical remedy to this problem is not complicated. Cox can install fiber optic lines closer to its end users and split its service nodes to increase capacity and maintain the advertised data rates for its high-speed Internet service. However, this undertaking is both expensive and time consuming and would take substantial cooperation between Cox and its interconnected ISPs in order to succeed.

It will take Cox approximately six years, from the date of the 1996 Act, to finish upgrading its systems from 550 MHz to 750 MHz, at a cost of \$10 billion. Since it embarked upon these substantial system upgrades, Cox has been operating a cash flow negative business. Going forward, it is an understatement that Cox's creditors and stockholders will be impatient to see its substantial capital investments end. They will be equally impatient to see these investments producing free cash flow. Cox cannot endlessly operate a cash flow negative business. Therefore, any additional upgrading of Cox's cable systems will have to be accomplished so that Cox can continue to operate in a prudent and business-like manner.

⁴⁵ See John M. Higgins, Grading the MSOs, Broadcasting and Cable, at 42-52, Nov. 27, 2000 (interview with Morgan Stanley Dean Witter media analyst Richard Bilotti, noting that Cox is an industry leader with respect to capital expeditures and affirming that the time for returns on investment has arrived).

Prudent operation includes, at a minimum, the ability to recover the additional costs of providing third-party ISP access from the cost-causative ISP, as well as a reasonable return on investment. The effect of these cost increases on retail prices, and thus on consumers, should not be underestimated.

With respect to the second issue, Cox will need to manage what the upstream and downstream data rates of third-party users of its data spectrum will be. Cox notes that Internet usage will change substantially in the coming years as new bandwidth-hungry applications emerge. As previously noted, today many Internet users limit their activities to web surfing and e-mail applications, neither of which requires very high data rates. But Internet Protocol telephony and streaming video applications are on the horizon. These new services will put even more pressure on the 16 MHz of spectrum capacity that Cox has allocated for the provision of high-speed Internet services. Again, the expensive and time-consuming solution is to extend fiber deployments so that fewer users are connected to each node. Cox also will need to implement some of its bandwidth recovery strategies noted earlier. But these solutions are neither instantaneous nor inexpensive.

As Cox has stated publicly, it is in the company's interest to offer its customers a choice of ISPs. It intends to seek relationships with unaffiliated ISPs after its contractual obligation to @Home expires. To that end, Cox plans to commence a test of its shared broadband high-speed data infrastructure with several unaffiliated ISPs during the first half of 2001. But the

⁴⁶ A recent PricewaterhouseCoopers Consumer Technology study reportedly found that consumers are spending even less time web surfing this year, and are demonstrating little enthusiasm for broadband applications such as downloading video streaming videos or short films. Ken Kerschbaumer, *Is the Web losing its leisure-time appeal?*, BROADCASTING & CABLE, November 6, 2000, at 42. This may be seen as further evidence that the young broadband marketplace continues to exist in a state of flux and uncertainty while both consumers and service providers sort out their desires and priorities.

data spectrum must allow Cox to control the rate and manner of new end-user hookups, and third-party ISP upstream and downstream data rates. Cox must manage this transition not only so that existing high-speed data customers can continue to receive the data rates and service reliability that they have been promised, but also so that Cox can undertake additional capital spending for high-speed data network capacity in an economically prudent manner.

The significance of these technology issues is central to any discussion about third-party access to Cox's high-speed data spectrum. Setting aside all questions about whether there is any jurisdiction or marketplace predicate for the imposition of common carrier access regulation on cable-provided Internet services, such a regulatory scheme cannot be made to work as a matter of physics and network functionality, and should not be imposed.

IV. CABLE INTERNET SERVICES ARE INTERSTATE INFORMATION SERVICES UNDER THE COMMUNICATIONS ACT.

In the wake of several inconsistent federal court decisions concerning the proper regulatory classification of cable Internet service, ⁴⁷ the Commission observes that it "... has not itself resolved that exceptionally complex dispute" Cox believes that a rigorous analysis of the Communications Act and Commission precedent on this issue leads to an inescapable conclusion: in addition to meeting the definition of Title VI "cable services," cable Internet services also are properly classified as Title I information services. The Communications Act defines an information service as a service that, using telecommunications, offers users the

⁴⁷ Compare AT&T Corp. v. City of Portland, 216 F.3d 871, 877 (9th Cir. 2000) (suggesting in dicta that cable modem service comprises both a "telecommunications service" and an "information service.") ("Portland") with Gulf Power Co. v. FCC, 208 F.3d 1263, 1275-78 (11th Cir. 2000) (holding that Internet service is neither a cable service nor a telecommunications service) and MediaOne Group, Inc. v. County of Henrico, 97 F.Supp.2d 712, 714 (E.D. Va. 2000), appeal pending, 4th Cir. No. 00-1680 (concluding that cable modem service is a cable service).